

May 19, 2011

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Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

***Re: Improving Communications Services for Native Nations by Promoting Greater
Utilization of Spectrum over Tribal Lands - WT Docket No. 11-40***

Dear Ms. Dortch:

xG Technology, Inc. (“xG”) respectfully submits the following comments in response to the Commission’s Notice of Proposed Rulemaking (the “NPRM”), seeking ways to improve communications services for Native Nations by promoting greater utilization of spectrum over Tribal lands.¹

xG is a developer of a broad portfolio of wired and wireless communications intellectual property, including cognitive radio networks. During the past year, the Company has successfully deployed cognitive cellular mobile radio test networks in Fort Lauderdale, Florida and rural Arkansas using the unlicensed 900 MHz band.

More recently, the U.S. Army awarded xG a contract to conduct laboratory and field tests of its xMax[®] cognitive cellular network for potential use by military forces. Under the terms of the contract, the Company has delivered xMax[®] equipment to the Fort Monmouth, N.J., lab facility for the Army’s Communications-Electronics Research, Development, and Engineering Center (CERDEC). In addition, xG has installed a multisite xMax[®] system over a large part of the U.S. Army’s Fort Bliss Desert Training areas. The xMax[®] system is being evaluated and utilized by soldiers in garrison (the built-up living and working area of the base) while they finalize training in preparation for the Network Integration Evaluation taking place this summer. Evaluation of the system will continue as the xMax[®] system is redeployed with the soldiers to White Sands Missile Range. This testing will have direct applicability for the deployment of xMax[®] systems in and around Tribal lands that are unserved or underserved areas. xG has commercialized its technology through a range of spectrum-agnostic, cognitive radio solutions

¹ Improving Communications Services for Native Nations by Promoting Greater Utilization of Spectrum over Tribal Lands, WTB Docket No. 11-40, *Notice of Proposed Rulemaking*, FCC 11-29 (rel. Mar. 3, 2011).

that enable commercial service providers and public safety entities to deliver a wide range of fixed and mobile wireless services using licensed and/or unlicensed spectrum.²

xG supports the Commission's efforts to encourage the further deployment and use of spectrum for Wireless Radio Services over Tribal lands, as well as for reconsideration of its former prohibition on the use of TV band devices in border areas with Canada and Mexico, which include Tribal lands.³ Taken together, these actions should make it easier for Tribes and rural service providers to deploy cognitive radio networks to meet the needs of Tribal members as well as other residents of underserved Tribal lands.

The use of TV white space spectrum to serve unserved and underserved Tribal lands makes sense from a technical as well as a business standpoint because the superior propagation characteristics of the TV bands will allow the Tribes and other rural service providers to cover large areas with a minimum number of towers and other infrastructure. White space spectrum is quite plentiful in these areas, and promoting its use in accordance with existing FCC rules would allow prompt deployment of service without the need for special auction procedures or mechanisms for re-licensing commercial spectrum that has already been licensed to third parties.

Moreover, cognitive radio technologies such as xG's xMax[®] are highly scalable and can be adapted for a wide variety of terrain, weather conditions, and fixed and/or mobile communications services. xG's efficient utilization of unlicensed spectrum would also allow service to unserved coastal areas and offshore islands to the extent there are any unserved/underserved Tribal lands in areas such as these. The Commission has noted that funding is a critical problem for deployment of infrastructure on Tribal lands where often there is no private sector business case for such deployment.⁴ Removing the cost of licensed spectrum from the equation is the best way to address this problem and it will help improve the long-term business case for making service available to remote areas.

The Commission should take further measures to facilitate the economic deployment and use of cognitive radio technologies in Tribal lands. xG strongly believes that the Commission's policies and rules should take into consideration the environment in which opportunistic and dynamic use systems will be deployed. In particular, radio systems deployed in rural areas including Tribal lands should not be subject to the same restrictions as those deployed in urban areas. Case in point – antenna heights and maximum transmit power allowed for TV white space operations are currently the same no matter where the white space system is deployed. While these restrictions may be appropriate for urban, suburban or rural deployments near the edge of the exclusion zones, the Commission's rules need to be more flexible and allow additional RF

² Further information about the Company can be found at www.xgtechnology.com.

³ Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, *Second Memorandum Opinion and Order*, FCC 10-174 at 51-52 ¶¶ 138-141 (2010).

⁴ *NPRM* at ¶19.

output power and tower height for rural deployments that are large distances from exclusion zones. Relaxation of rules for remote rural areas, as xG has previously urged in the context of the *Dynamic Spectrum Access* proceeding⁵ would support more cost effective and faster rollout of wireless rural broadband connectivity.

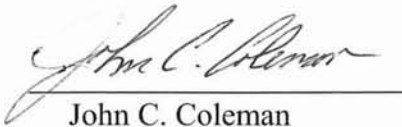
xG urges the Commission to move quickly to adopt policies and rules that maximize technical flexibility for rural operations and that embrace its earlier public interest findings from the *Rural Spectrum Access Report and Order*.⁶ Relaxing maximum transmit power and antenna height limitations for all spectrum bands that have been identified for dynamic spectrum use will encourage business opportunities and spur competition by reducing the cost of serving sparsely populated rural areas. Enabling dynamic access technologies in this manner will provide direct economic benefit to rural areas and it will help the Commission to achieve policy goals that are central to the National Broadband Plan.

Finally, promoting the use of use of TV white space spectrum and unlicensed cognitive radio technologies developed by companies such as xG will facilitate rapid deployment of *ad hoc* emergency networks over Tribal lands and surrounding rural areas in the event of forest fires, floods or other natural disasters without the need for frequency coordination or the threat of causing harmful interference to adjacent market area license holders. This would allow Tribal and State Government authorities as well as entities such as the U.S. Forest Service to maintain a supply of portable base station facilities that may be deployed on very short notice as needed to support firefighting and other rescue/relief efforts in remote and uninhabited areas where such service is currently unavailable.

Wherefore, the Commission should adopt rules that promote the greater use of wireless spectrum over Tribal lands, as described herein.

Respectfully submitted,

xG TECHNOLOGY, INC.

By: 
John C. Coleman
Chief Executive Officer

⁵ See Response of xG Technology, Inc., ET Docket No. 10-237 (filed Feb, 28, 2011) at pp. 8-9.

⁶ See Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, WT Docket No. 02-381, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 19078 (2004) (*Rural Spectrum Access Report and Order*).